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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,413	08/01/2000	William N. Demakakos	50107-461	5932

32127 7590 05/13/2004

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EXAMINER

LEVITAN, DMITRY

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 05/13/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/630,413

Applicant(s)

DEMAKAKOS ET AL.

Examiner

Dmitry Levitan

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 21-33, 35-40, 42-44 and 46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 21-33, 35-40, 42-44 and 46 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2662

Amendment, filed on 02/09/04, has been entered. Claims 1-19, 21-33, 35-40, 42-44 and 46 remain pending.

Drawings

1. The drawings are objected to because typographical error on Fig. 1 “MU” instead of NIU, connections between the controller 340 and relay paths 334 and 348 seems an error, connections between the controller and push button switch should be clarified to show when they are connected to the crossed connections and when they are not. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 317. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 is a duplicate of claim 2.

Art Unit: 2662

4. Claim 43 is objected to because of the following informalities: typographical error on line 7. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 11, 23-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claims 11, 23, 25, how to de-activate both loopback circuits with a loop-down code received at one input;

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Art Unit: 2662

8. Claims 2-4, 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the first signal generator" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the second signal generator" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the second digital carrier link" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7-9, 12-14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (US 5,343,461) in view of Gewin (US 5,060,226).

10. Regarding claim 1, Barton substantially teaches the limitations of claims 1:

A first input port (REV port of path 12 on Fig. 2 and 3, 16:60-67 and 17:1) for connection to a first digital carrier link for coupling to a digital network (DS1 facility 15 on Fig. 1-3);

Art Unit: 2662

A first output port (RCV OUT port of path 12 on Fig. 2 and 3) for connection to a second digital carrier link for coupling to a digital terminal equipment (CPE 20 on Fig. 2 and 3);

A first path between the first input and output ports (path 12 on Fig. 2);

A second input port (XMT IN port of path 14 on Fig. 2 and 3) for connection to the second digital carrier link for coupling to a digital terminal equipment;

A second output port (XNT OUT port of path 14 on Fig. 2 and 3) for connection to the first digital carrier link for coupling to a digital network;

A second path between the second input and output ports (path 14 on Fig. 2);

A first selectively-activated loopback circuit (using loop-up or loop down codes 17:18-25) which when activated provides a third path between (using K1 relays on Fig. 2 and 3, 18:7-19) the first input port and the second output port;

A second selectively activated loopback circuit (inherently part of the system, because Barton teaches performing a loopback from the user side 24:34-55) which, when activated (from the user side 19:53-67 and 20:1-4), provides a fourth transmission path between the second input port and the first output port,

A controller coupled to the first selectively-activated loopback circuit (loopback code detector on Fig. 2 and 3, 18:7-19) to activate it individually.

Barton does not teach a controller to activate the second loopback circuit and to activate the first and second loopbacks simultaneously.

Gewin teaches a controller to activate the second loopback circuit (data selector 58 on Fig. 1B monitoring the near and far sides 6:7-15) and activate the first and second loopbacks simultaneously (activating relay 64 on Fig. 1B and 6:54-63).

Art Unit: 2662

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate second loopback circuit activation and simultaneous activation of both loopbacks in the controller of Gewin into the system of Barton to improve the system loopback capabilities for near and far sides.

Regarding claim 2, Barton teaches a multi position switch to activate the first regenerator in first position and de-activate in a second (switch 143 on Fig. 6 and 31:12-27).

Regarding claims 7 and 8, Barton teaches a line build-out circuit and pre-equalizing build-out circuit (automatic line build-out 34 on Fig. 2 and 17:8-10 and 18:56-59).

Regarding claim 9, Barton teaches a selectably-enabled power supply to provide power to the second carrier link (DC CON on Fig. 6 and 35:25-45).

Regarding claims 12-14, Barton teaches four jacks (Fig. 3), two for non-intrusive monitoring/signal detection (RCV BRG and XMT BRG) and two for signal access/injection (EQ IN on network side and EQ OUT on terminal side).

Regarding claims 17 and 18, Barton teaches input and output ports connected to transmission span 10 on Fig. 1 disclosed as DS1 or T1 facility 15:36-46).

11. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton, Gewin and Garcia in view of admitted prior art disclosed in the specification on page 14 lines 11-16.

Barton, Gewin and Garcia substantially teach the limitations of claims 15 and 16.

Barton, Gewin and Garcia do not teach format detectors coupled with visual indicators identifying types of frame formats.

Art Unit: 2662

Admitted prior art teaches first and second format detectors to determine first and second formats of signals on first and second paths are one of unframed, SF/D4 and T1-ESF.

Official notice is taken that visual indicators identifying frame format are well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add three visual indicators identifying three types of loop backs to the system of Barton, Gewin and Garcia to improve the system visual loop back presentation.

12. Claims 4, 22, 29, 32 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (US 5,343,461) in view of Gewin (US 5,060,226) and Garcia (US 5,224,149).

Regarding claims 4, 22 and 36, Barton substantially teaches the limitations of claims 4, 22 and 36:

A first input port (REV port of path 12 on Fig. 2 and 3, 16:60-67 and 17:1) for connection to a first digital carrier link for coupling to a digital network (DS1 facility 15 on Fig. 1-3);

A first output port (RCV OUT port of path 12 on Fig. 2 and 3) for connection to a second digital carrier link for coupling to a digital terminal equipment (CPE 20 on Fig. 2 and 3);

A first path between the first input and output ports (path 12 on Fig. 2);

A second input port (XMT IN port of path 14 on Fig. 2 and 3) for connection to the second digital carrier link for coupling to a digital terminal equipment;

A second output port (XNT OUT port of path 14 on Fig. 2 and 3) for connection to the first digital carrier link for coupling to a digital network;

A second path between the second input and output ports (path 14 on Fig. 2);

Art Unit: 2662

A first signal regenerator coupled between the first input and output (regenerator 24 on Fig. 2 and 3, 15:57-63);

A first selectively-activated loopback circuit (using loop-up or loop down codes 17:18-25) which when activated provides a third path between (using K1 relays on Fig. 2 and 3, 18:7-19) the first input port and the second output port;

A second selectively activated loopback circuit (inherently part of the system, because Barton teaches performing a loopback from the user side 24:34-55) which, when activated (from the user side 19:53-67 and 20:1-4), provides a fourth transmission path between the second input port and the first output port,

A controller coupled to the first selectively-activated loopback circuit (loopback code detector on Fig. 2 and 3, 18:7-19) to activate it individually.

Barton does not teach a controller to activate the second loopback circuit, to activate the first and second loopbacks simultaneously and a second signal regenerator coupled between second input and output.

Gewin teaches a controller to activate the second loopback circuit (data selector 58 on Fig. 1B monitoring the near and far sides 6:7-15) and activate the first and second loopbacks simultaneously (activating relay 64 on Fig. 1B and 6:54-63).

Garcia teaches a second signal regenerator coupled between second input and output (regenerator 64 on Fig. 1 and 2, 4:37-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate second loopback circuit activation and simultaneous activation of both

Art Unit: 2662

loopbacks in the controller of Gewin and a second regenerator of Garcia into the system of Barton to improve the system loopback capabilities for near and far sides.

In addition, regarding claim 36, Barton teaches first and second monitoring jacks for non-intrusively monitoring the first and second paths (RCV BRIDG and jack 181 on Fig. 3 and 6, 31:61-67 and 32:1).

Regarding claim 29, Barton teaches four jacks (Fig. 3), two for non-intrusive monitoring/signal detection (RCV BRG and XMT BRG) and two for signal access/injection (EQ IN on network side and EQ OUT on terminal side).

Regarding claim 32, Barton teaches input and output ports connected to transmission span 10 on Fig. 1 disclosed as DS1 or T1 facility 15:36-46).

13. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (US 5,343,461) in view of Gewin (US 5,060,226) and Garcia (US 5,224,149).

Regarding claim 28, Barton, Gewin and Garcia substantially teaches the limitations of claim 28, including a pre-equalized circuit for the first regenerator, but they do not teach a pre-equalized circuit to shape the second regenerated signal before it reaches the second output port.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate second pre-equalizer to shape the signal for the second generator into the system of Gewin, Garcia and Barton, if needed, to correct signal level for the DSX1/T1 loop.

Art Unit: 2662

14. Claims 30, 31 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (US 5,343,461), Gewin (US 5,060,226) and Garcia (US 5,224,149) in view of admitted prior art disclosed in the specification on page 14 lines 11-16.

Barton substantially teaches the limitations of claims 30, 31 and 37-39.

Barton does not teach first and second format detectors to determine first and second formats of signals on first and second paths and first and second indicators to provide first and second plurality of indications based on first and second formats.

Admitted prior art teaches first and second format detectors to determine first and second formats of signals on first and second paths on first and second paths are one of unframed, SF/D4 and T1-ESF.

Official notice is taken that indicators to provide first and second plurality of indications based on first and second formats are well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate first and second format detectors to determine first and second formats of signals on first and second paths and first and second indicators to display the formats into system of Barton to improve visual indication of the signals received by the system.

15. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton, Gewin and Garcia.

Barton, Gewin and Garcia substantially teach the limitations of claims 5 and 6.

Art Unit: 2662

Barton, Gewin and Garcia do not teach three visual indicators identifying three types of loop backs. Official notice is taken that visual indicators identifying loop backs are well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add three visual indicators identifying three types of loop backs to the system of Barton, Gewin and Garcia to improve the system visual loop back presentation.

16. Claims 10 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton, Gewin and Garcia.

Barton, Gewin and Garcia substantially teach the limitations of claims 10 and 27, including manual loop back switches on Fig. 6 and switches 203 and 205 37:6-19).

Barton, Gewin and Garcia do not teach three position switch to activate three types of loop backs. Official notice is taken that multi position switches to activate different options of the device are well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add three position switch to activate three types of loop backs to the system of Barton, Gewin and Garcia to improve the system manual operation.

17. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (US 5,343,461) in view of admitted prior art disclosed in the specification on page 14 lines 11-16. Barton substantially teaches the limitations of claim 43:

Art Unit: 2662

A first input port (REV port of path 12 on Fig. 2 and 3, 16:60-67 and 17:1) for connection to a first digital carrier link for coupling to a digital network (DS1 facility 15 on Fig. 1-3);

A first output port (RCV OUT port of path 12 on Fig. 2 and 3) for connection to a second digital carrier link for coupling to a digital terminal equipment (CPE 20 on Fig. 2 and 3);

A first path between the first input and output ports (path 12 on Fig. 2);

A second input port (XMT IN port of path 14 on Fig. 2 and 3) for connection to the second digital carrier link for coupling to a digital terminal equipment;

A second output port (XNT OUT port of path 14 on Fig. 2 and 3) for connection to the first digital carrier link for coupling to a digital network;

A second path between the second input and output ports (path 14 on Fig. 2);

First and second monitoring jacks for non-intrusively monitoring the first and second paths (RCV BRIDG and jack 181 on Fig. 3 and 6, 31:61-67 and 32:1);

Visual indicator (loss of signal LED 25:34-39).

Barton does not teach first and second format detectors to determine first and second formats of signals on first and second paths and first and second indicators to provide first and second plurality of indications based on first and second formats.

Admitted prior art teaches first and second format detectors to determine first and second formats of signals on first and second paths.

Official notice is taken that indicators to provide first and second plurality of indications based on first and second formats are well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate first and second format detectors to determine first and second formats

Art Unit: 2662

of signals on first and second paths and first and second indicators to display the formats into system of Barton to improve visual indication of the signals received by the system.

18. Claims 19, 21, 33, 35, 40, 42, 44 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton, Gewin and Garcia and admitted prior art in view of Bergstrom (US 5,521,977).

Barton, Gewin, Garcia and admitted prior art substantially teach the limitations of claims 19, 33, 40 and 44.

Barton, Gewin, Garcia and admitted prior art do not teach implementing the repeater on 200 or 400 type circuit cards.

Bergstrom teaches implementing the repeater on 200 or 400 type circuit cards (Type-400 NIU 5:28-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add implementing the repeater on 200 or 400 type circuit cards of Bergstrom to the system of Barton, Gewin, Garcia and admitted prior art to improve the system compatibility with existing shelves.

Regarding claims 21, 35, 42 and 46, Barton teaches implementing the repeater on the card with 56 pin-outs (using 56 pin connector 27:43-52).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gewin US005060226 Telecommunications network test system.

Art Unit: 2662


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is 703-305-4384. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

Dmitry Levitan
Patent Examiner
05/05/04.


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